MITSUBISHI MOTORS

Interviews with development team:

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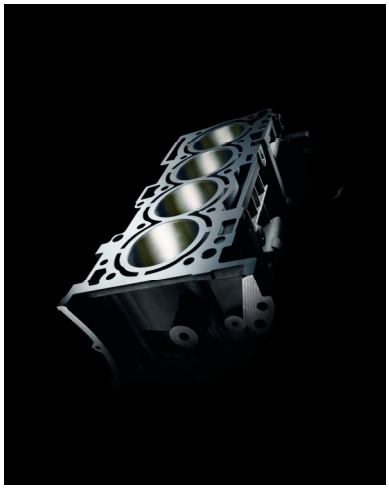
Evolutionary advances in Lancer Evolution X's engine

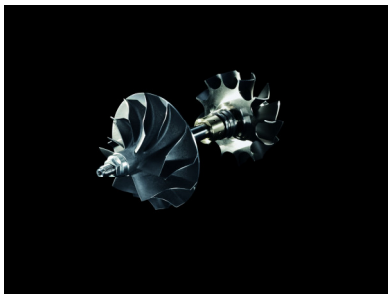


We started off trying to decide which engine we should use to power the Lancer Evolution X. Our discussions revolved around whether to develop it from the 4G6-type already in use or from the new 4B12 engine. One major decision was that the engine would use an aluminum cylinder block, and so our primary concern involved reliability. But most importantly, we wanted the required performance at the same time providing the necessary reliability. We also considered the fact that emission regulations would continue to get tougher and tougher. The 4G6 engine only conforms to the Japanese 2000 emission level standards but we were going to have to reduce emissions by 75% for Evolution X, and that presented a considerable challenge.

Using an aluminum cylinder block reduces engine weight and improves engine cooling overall. This also lends to improved performance, particularly in terms of low-end and mid-range torque.

As a result, the car has become much easier to drive. As to regulatory compliance, well, there are lots of regulations, and not just emissions standards. Regulations require that we make the engine lead-free, for example, and so we had to base our development on the use of materials that did not contain any lead. The industry trend is to develop lead-free parts while the new engine is being developed and, to be honest; we really had a tough time developing the new parts.

Development framework for Evolution X's new engine



Because it's a new engine, both engine and other motorsport designers are involved and so a lot more people were working on it than usual. That also led to higher development costs. The 4G6 engine was developed on the premise that it would later be turbocharged, but the new engine was developed as a turbocharged unit right from the start. And that pushed up development costs considerably.

We were working with the motorsport team in designing and developing the engine and so strength was a major consideration with most of the parts. Since we were also required to improve performance, in the end, nearly all the component parts had to be remade. So while the engine is called the 4B1-type, it is, for all intents and purposes, a totally different engine.

Impressions from driving Evolution X

You notice the biggest difference when you're driving around town, particularly at slow speeds in heavy traffic.

That's when you feel what a really easy car it is to drive. And with the engine mated to the Twin Clutch SST transmission, you get lots of low-end torque, so you can coast along at low speeds without worrying about having to work the accelerator. That makes it really easy for the average driver. And once you're out of town driving over mountain passes and so on, then it drives just like a Lancer Evolution so I surmise that the new Evolution will suit a wider range of drivers than before. Engine noise still rises at higher revs, but compared with the 4G6, there's a more linear feeling to it, which is great. I think that when you get behind the wheel you'll find great improvement in the sound.